CCTV

SYSTEMS

Installation and Operation Manual
for
Mini Dome Camera

MODEL N0.:SP-606HB

Please read the operation manual carefully before installing and Using this unit

2006021101

	Insufficient electrical power	Replace
Ball holder out of control	Abnormal self-inspection	Switch on again
	Bad connection of control wire	Remove
	Problems on main machine	Switch on the main machine
	Too heavy load or longer distance of communication	1. Connect 120 Ω resistor of the farthest ball holder from the controller and let others to be broken; 2. Increase code distributor.

Normal problems and their causes and remedies mentioned above are only for reference. Should you meet other special problems, you can ask for technical support from your dealer directly.

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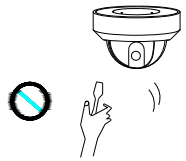
I. Points for Attention

1. Before the product is installed, please read the operation manual carefully.
2. The power supply of the product is DC12V/1A.
3. During the transportation, storage and installation, the product should be avoided from incorrect operations such as heavy pressing, strong vibration etc., which can cause damage of product as there are sophisticated optical and electronic devices inside the ball.
4. Do not attempt to disassemble the camera. In order to prevent electric shock, do not remove screws or covers. There are no user-serviceable parts inside.



5. Always follow all electrical standards for safety when it is in operation. Adopt the particular power supply, which is provided with the unit. RS-485 and video signal should keep enough distance with high voltage equipments and cables when they are in transmission. Precautions for anti-lightning and anti-surging should be taken if necessary.
6. The products with plastic shell should be indoor installed and operated to avoid rain and moisture. Do not use it in wet places.
7. The waterproof grade of metal low speed dome is IP66, and defend-burst.

VII. Troubleshooting

Problem	Possible Causes	Remedies
No action and images when power is switched on	Power supply damaged or insufficient power	Replace
	Wrong connection of power supply	Correct
	Faults in engineering circuits	Remove
Abnormal self-inspection. Images with roaring sound of the motor	Mechanical fault	Repair
	Tilting camera	Place uprightly
	Insufficient electrical power	Replace with qualified power supply and let it close to the ball holder
Normal self-inspection but no images	Wrong connection of VF circuit	Correct
	Bad connection of VF circuit	Remove
	Camera damaged	Replace
Successful self-inspection but out of control	Wrong connection of control signal wire	Correct
	Mismatched address	Reselect
	Mismatched protocol	Adjust protocol to match with the controller and switch on again
Images unstable	Bad connection of VF circuit	Remove

	Installation	Ceiling Installation/Wall mounting/In-Ceiling Installation
	Relative Temperature	10-75%（in case no condensation）
	Operation Temperature	0℃~40℃
	Waterproof grade（metal）	IP66
Function	Size	4.5″
	CCD	1/3″ Color Sony CCD
	Horizontal Scanning Range:	360°
	Horizontal Scanning Speed:	0-12°/s
	Vertical Scanning Range:	0°～90°
	Vertical Scanning Speed:	0-12°/s
	Scanning Limitation:	Horizontal adjustable
	TV format:	PAL format,1/4″ color CCD
	Resolution:	480TVL
	Lowest Luminous:	0.1LUX
	Built-In Lens:	Fix lens 2.8-16mm
	Presetting Position:	32
	Decoder:	Have
	Cover Material:	Aluminum alloy,Vandal proof and whether proof
	Input voltage	12V DC
	Wattage:	12VA

Ⅱ Description of Functions

The intelligent dome camera is a hi-tech CCTV product, which incorporates the high-clarity color camera, panoramic speed-variable PAN/TILT, multifunctional decoder into a whole. It can largely reduce connection and installation processes of components in the system, rise up reliability of the system and facilitate installation and maintenance. Therefore it has advantages of beautiful appearance, compact structure and easy operation.

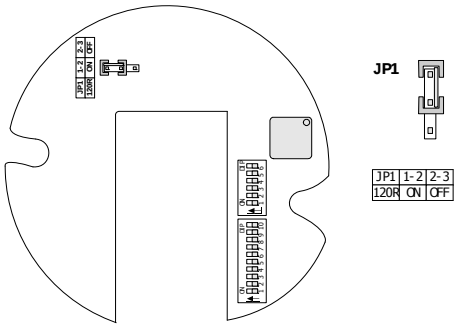
1. Built-in color video camera with vari focus lens
   a. 4mm、6mm、8mm、12mm lens are available;
   b. Automatic iris and shutter;
2. Integrated Multi-Protocol Decoder.
   a. With built-in Decoder and integrated multi-protocol, the customer can set up communication protocol and baud rates at his discretion directly according to the need of the system. It is completely compatible with over ten kinds of control system form main manufacturers;
   b. RS485 serial control and addresses of the dome 1-1023.
3. Integrated Speed-Variable PAN/TILT
   a. Turning 0--360° horizontally and continuously with unlimited positions and turning 90° vertically;
   b. With 32 prepositions and data power off memory.
   c. The dome camera can scan cubically between two positions with dwelling time of 4s at each position and the scan speed of 7.5°/s;
   d. With the tour locus setup function with data power-failure memory which can be called;
   e. The range of both horizontal and vertical speed is 0 - 12°/S;
   Six patrol can be set up in maximum and each patrol can set up sixteen preset positions with dwelling time fixed at 4s and the tour speed is 7.5°/s;

III. Setup of the speed dome camera

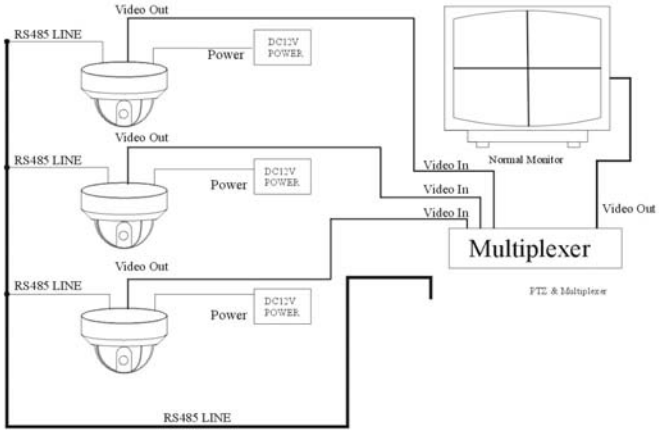
Before the installation of the product, first confirm the communication protocol and the baud rate the controller of the system adopts, then set the ID-CODE switch SW2 of the dome camera to be identical with that in the system, in which SW1 is used to set the address of the dome and SW2 is used to set the protocol type and the baud rate (see attached tables 1, 2 and 3).

Dome Address Select　　Protocol Select

JP1 is the 120 Ω terminal resistor for RS485 Bus. When short-circuit terminal is set between “1-2”, the 120 Ω terminal resistor is connected. while it is set between “2-3”, the resistor is opened. Take care that on RS 485 Bus only one farthest spherical camera has the terminal resistor connected while other devices should have their terminal resistors opened.

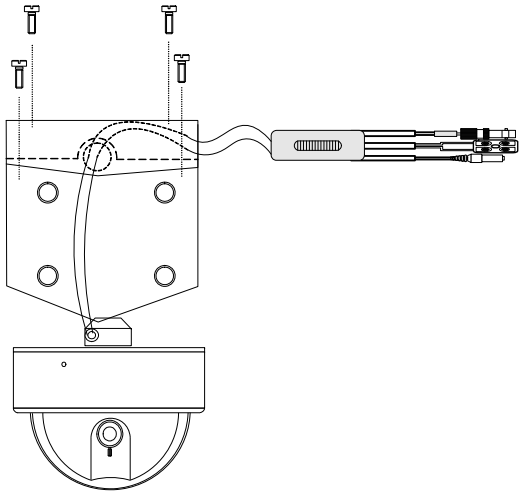


V. Connection Drawing of the System for Reference

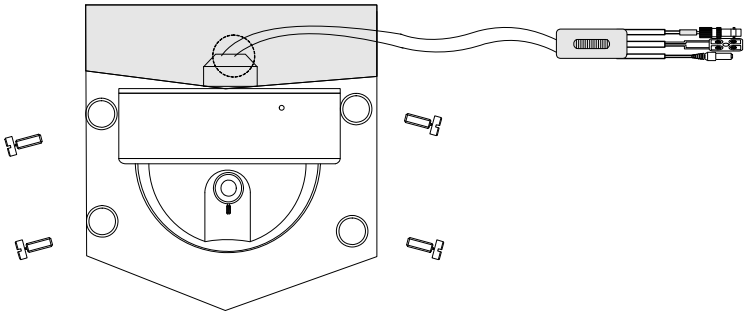


VI. Main Technical Specifications

Specifications	TV SYSTEM	NTSC
	Image Sensor	1/4’ CCD Image Sensor
	CCD total pixels	542（H）×496（V）
	VF Output	Compound Signal 1.0Vp-p/75Ω
	Scanning System	525 lines, 60 fields/sec
	Power Supply	DC12V±10%　　1.0A
	Power Consumption	12VA（Fan/Heater excluded）



4） Put the connect cable across the bracket and surface, and fix the wall mount；according the different environment to choice the bolts by yourself;



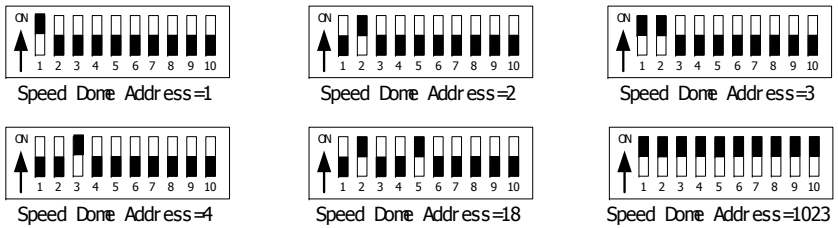
5）Reference the connect way，connecting according the fig of connection。

Attached Table 1: The setup of the address of the dome：

Dome Address	Bit of Switch									
	DIP -1	DIP -2	DIP -3	DIP -4	DIP -5	DIP -6	DIP -7	DIP -8	DIP -9	DIP -10
1	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
2	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
3	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
4	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
5	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
6	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
7	ON	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
8	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
9	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
10	OFF	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
11	ON	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
12	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF
13	ON	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF
14	OFF	ON	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF
15	ON	ON	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF
16	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
17	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
18	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
…	…									
1023	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON

Attached Table1

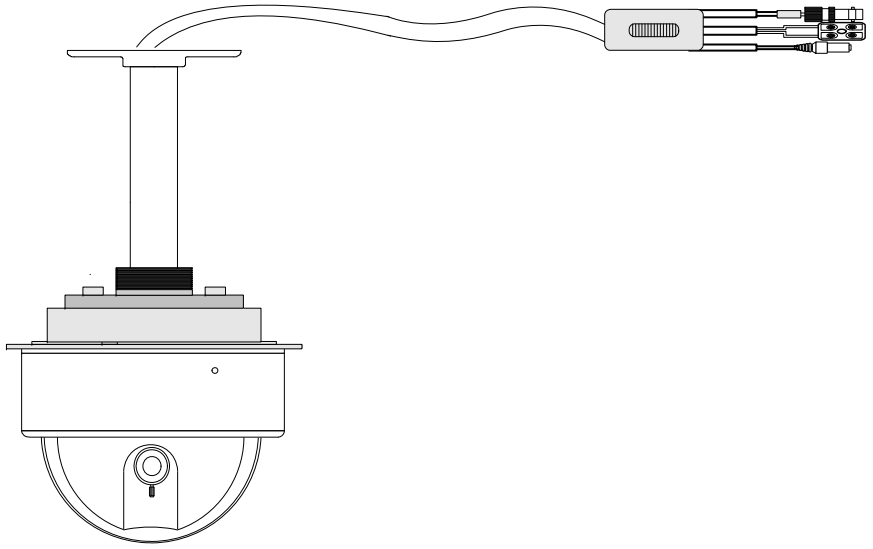
Example:



1. Addresses of the dome are denoted by binary code system in which ON means
   "1"; while OFF means "0".
2. Above coded addresses are only from no.1 to no.18. The codes of addresses from no.19 to no.1023 can be deduced by analogue.
3. All nine bits of the SW1 are used for addresses of the dome with its range from 1 to 1023.
4. Before the installation of this product, arrange the address of the dome well. All products have their default addresses before leaving the factory and are increased from 1. The address of the product is marked at the corresponding place, for example, "ID: 01" means the address of the product is 1.
5. When there are much dome camera are connected in the same RS485 bus in parallel, the addresses could not be overlapped, otherwise they'll be activated simultaneously when they are operated by the controller thus to affect the application of eh product.

Attached Table 2:

The setup of the communication protocols (DIP1-DIP4 of SW2) and the default baud rates (last 2 bits of SW2) are as follows. In case the default baud rate is not identical with that of the main controller, please set it to be identical with that of the main controller as per Attached Table 3.

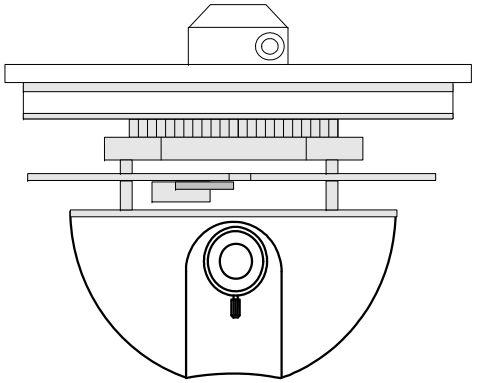


4) Reference the connect way, connect the wire according the board cable.

D. Metal shell（wall mount）

1) Amending the way of code reference ceiling mount；
2) Tale off ceiling installation board，put the wall installation board on，also pay attention the connect cable；

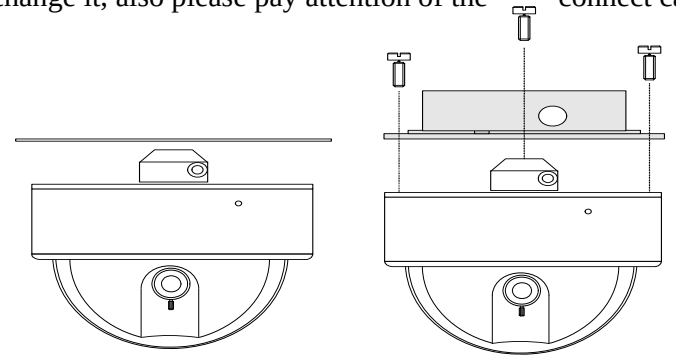
Put the connect cable across the fixed bracket，fix the dome with installation bracket by Φ3x5 bolt；



5) Reinstall the metal shell，and fixed the screws；
6) Educe the system cable from the aperture，Fix the dome to ceiling with Φ5x14 screw；
7) Reference the connect way of cable.

C. Metal Shell（Suspending mount）

1) Modify dial code way, please reference the ceiling mount；
2) Take off the ceiling mount board, use the suspending mount to change it, also please pay attention of the connect cable；



3) Put the cable cross the fixed bracket, then fixed the bracket and dome;

Attached table2

Type of communication	Selection of Protocols				Normal Baud Rate	
	DIP-1	DIP-2	DIP-3	DIP-4	DIP-5	DIP-6
SAMSUNG	ON	OFF	OFF	OFF	OFF	ON
GOLDENSIGHTB01	ON	OFF	OFF	OFF	OFF	ON
PELCO-D	ON	ON	OFF	OFF	OFF	OFF
PELCO-P/4800	OFF	OFF	ON	OFF	ON	OFF
PELCO-P/9600					OFF	ON
AELC	OFF	ON	ON	ON	OFF	ON

Notes to Attached Table 2:

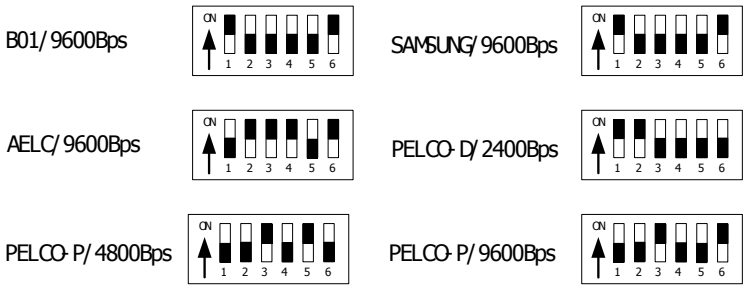
The baud rates corresponding to the protocol are only for reference and the customer can make modification based on the actual baud rate of the system as per Attched Table3. Take care that ever for reference, the coding swich should be set well can the system become effective otherwise the default rate of the system is 2400bps.

Attached Table3

Coding Switch / Baud Rate	1	2	3	4	5	6
2400bps					OFF	OFF
4800bps					ON	OFF
9600bps					OFF	ON
19200bps					ON	ON

Schematic drawing of codes:

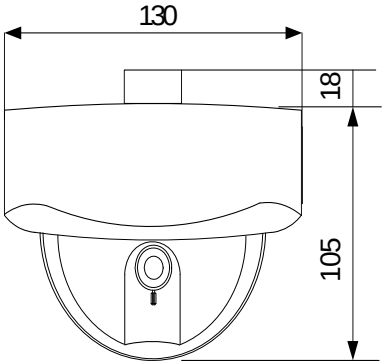
Example



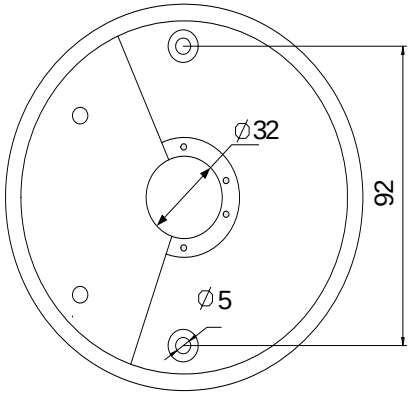
Ⅳ. Installation of Products

4.1 Dimension

a) Plastic Shell



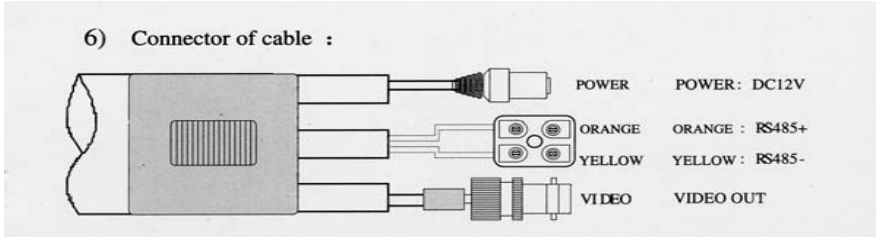
Dimension of shel



Dimension of bottom board l

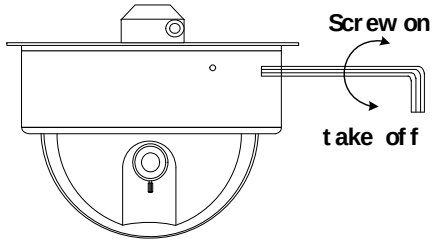
b) Metal Shell

B. Metal Shell(Ceiling mount)

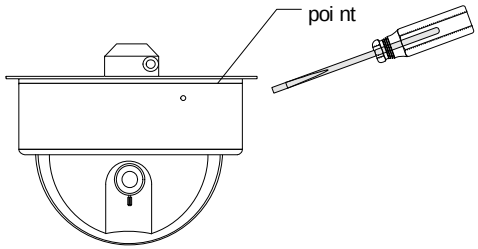


1) Drill the round hole(6cm) in ceiling, it is used for install the slot ring and educe the connect cable;

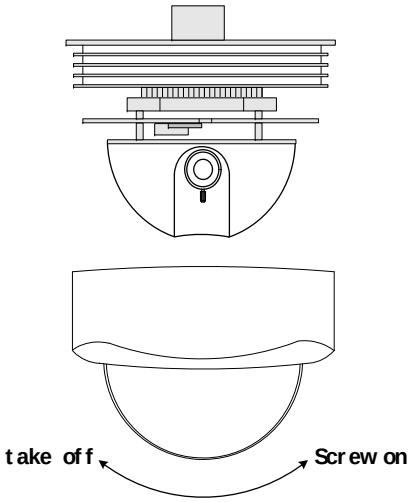
2) Take out the fixed screws use special tools, then put is well;



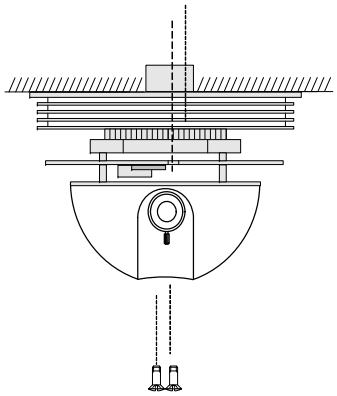
3) Due to demand of waterproof, inside with airproof circle; when take out the fixed screws, must use screwdriver to take the metal shell;



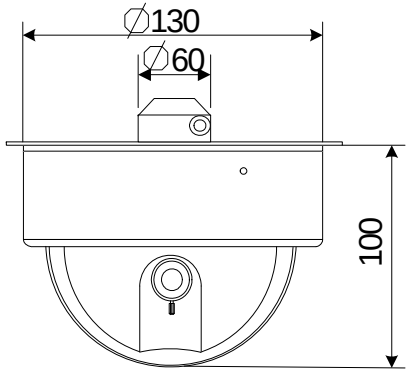
4) Setting the dial switcher(reference the way of dial code switcher);

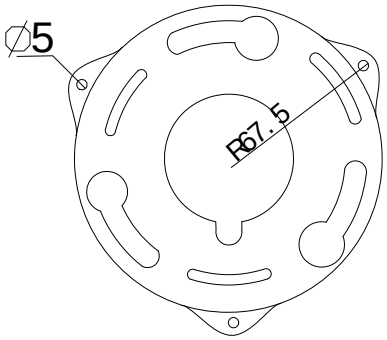


3) Setting the dial switcher(reference the way of dial code switcher);
4) Spinning the underpan, make the hole of PCB and hole of underpan corresponding. Then using the screw of Φ5×14 to fix the dome with ceiling.



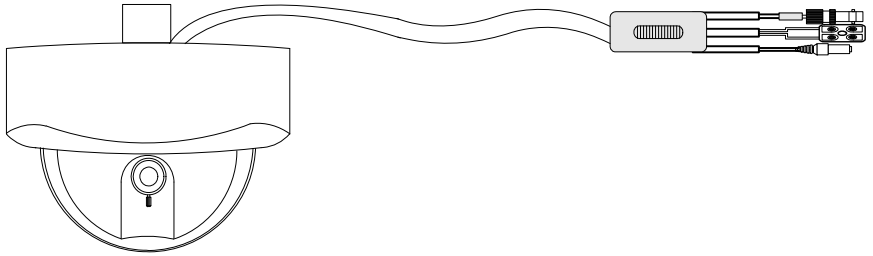
5) Screw on the dome cover with dome;





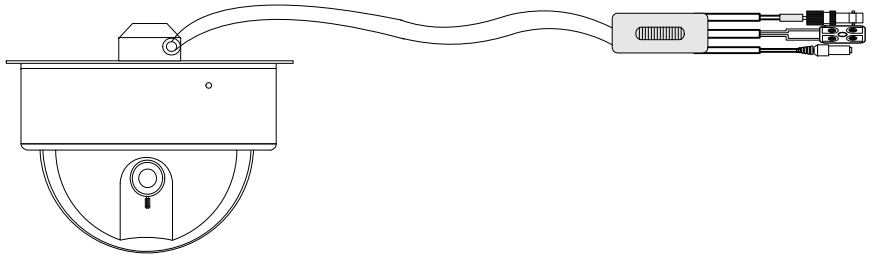
4.2 Installation

A. PlasticShell(Ceiling mount)

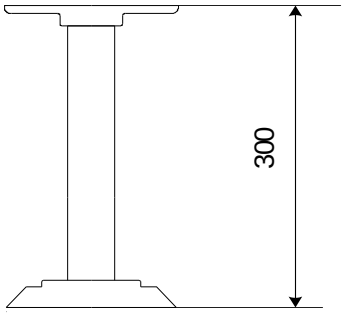


B. Metal Shell

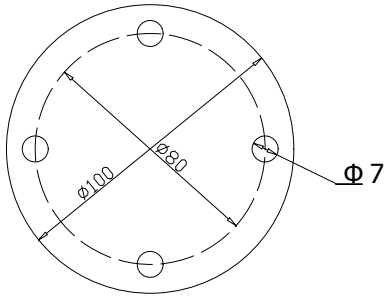
a) Ceiling mount



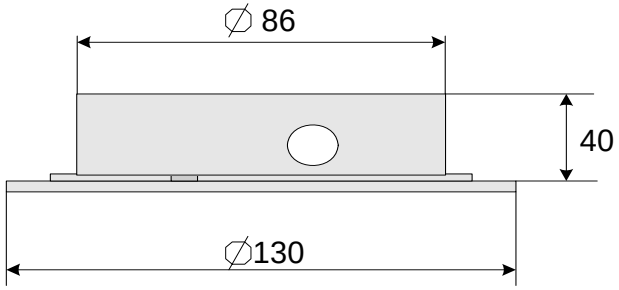
b) Suspend installation



Fixed bracket

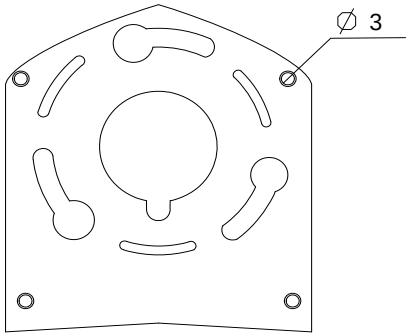


Orientation aperture

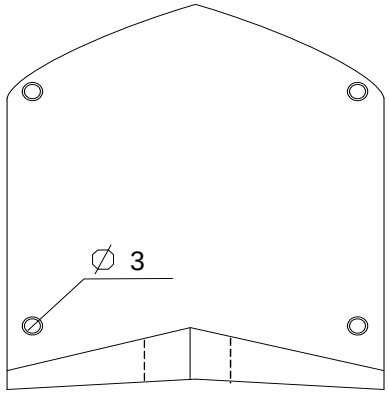


Suspend installation board

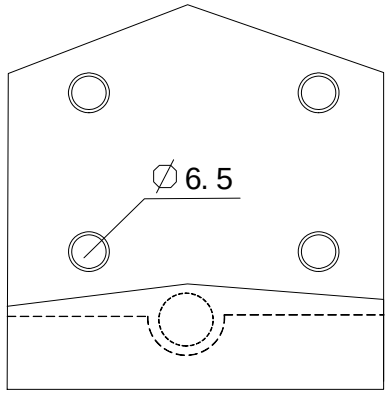
a) Wall mount



Wall mount board



Fixed bracket（with installation board）



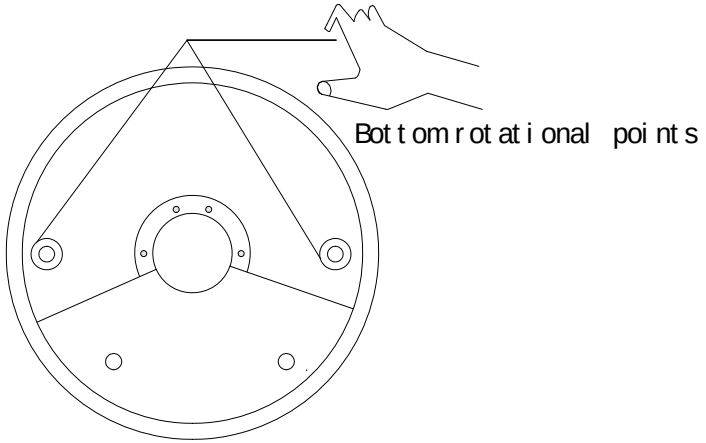
Fixed bracket（with wall interface）

4.3 Step of installation

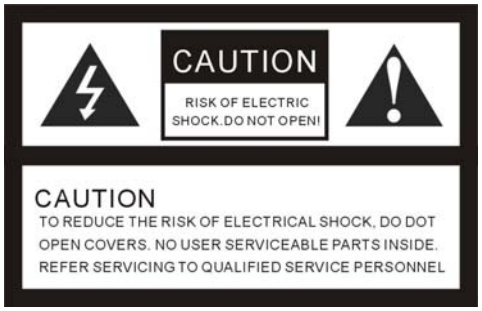
A. Plastic Shell (Ceiling mount)

1) Drill the round hole(6cm) in ceiling, it is used for install the slot ring and educe the connect cable;

2) Rotate the cover, pay attention for exert oneself point in bottom. Please do not rotate the protection part of slip ring in bottom. (salience part):



SAFETY PRECAUTIONS


CAUTION
RISK OF ELECTRIC SHOCK.DO NOT OPEN!
CAUTION
TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO DOT OPEN COVERS. NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL

The lighting flash with a arrowhead symbol, in an equilateral triangle, is intended to alert the user. There is uninsulated “dangerous voltage” presence near by the product’s enclosure which may be risk of to persons.

The exclamation point within an equilateral triangle is intended to alert the user to reference of the important operating and maintenance(servicing) instructions.

THE PRODUCT CODE MARKED ON THE BOTTTOM COVER. PLEASE FILL THE CODE IN THE FOLLOWING BLANK. PLEASE SAVING THIS SPECIFICATION CAREFULLY, SO THAT CHECKING

MODEL:_____

PRODUCT CODE:_____